

<p><b>DOCKET NO. 409A</b> - New Cingular Wireless PCS, LLC application for a Certificate of Environmental Compatibility and Public Need for the construction, maintenance and operation of a telecommunications facility located at 8 Barnes Road, Canaan (Falls Village), Connecticut. Reopening of this docket pursuant to Connecticut General Statutes § 4-181a(b) limited to Council consideration of changed conditions, revised tower site location and modified facility.</p>	<p>} } } }</p>	<p>Connecticut  Siting  Council  July 29, 2013</p>
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**DRAFT Findings of Fact**

**Introduction**

1. New Cingular Wireless PCS, LLC (AT&T), in Docket 409, applied to the Connecticut Siting Council (Council) on October 19, 2010 for the construction, maintenance and operation of a 150-foot wireless telecommunications facility at 8 Barnes Road in Canaan, Connecticut. (AT&T 1; Docket 409 Record)
2. The Council denied the Docket 409 application on August 25, 2011, finding that the facility, as proposed, would have a substantial adverse environmental effect. (AT&T 1; Docket 409 Record)
3. Pursuant to Connecticut General Statutes (C.G.S) Section 4-181a(b), AT&T filed a Motion to Reopen with the Council on February 15, 2013. The Motion to Reopen included AT&T contentions that changed conditions exist to cause the Council to reconsider its final decision. (AT&T 1)
4. In accordance with C.G.S § 4-181a(b), AT&T’s Motion to Reopen was served on all parties and intervenors as listed on the Docket 409 service list. (AT&T 4, R. 1)
5. AT&T’s Motion to Reopen presented a new site on Cobble Hill for the Council to consider, referred to as the proposed modified site in this document (refer to Figure 1). AT&T is not requesting reconsideration of the original Docket 409 site, also located on Cobble Hill. (AT&T 1; Tr. 1, pp. 138-139)
6. On February 15, 2013, the Council issued a memorandum to parties and intervenors to the original Docket 409 proceeding requesting comments or statements of position in writing with respect to whether the AT&T motion to Reopen should be granted or denied, due on or before the close of business on March 1, 2013. The memoranda also stated that the AT&T Motion to Reopen would be placed on the Council meeting agenda of March 7, 2013 for Council consideration. (Record)
7. The Council, during the meeting held on March 7, 2013, moved to hold a hearing to determine if changed conditions warranted reopening and reconsideration of the final decision in this docket. (Council’s Docket 409A Hearing Notice of March 25, 2013)
8. Pursuant to C.G.S. § 16-50m, the Council, after giving due notice thereof, held a public hearing on April 30, 2013, beginning at 3:40 p.m. and continuing at 7:00 p.m. at the Lee H. Kellogg School, 47 Main Street, Falls Village, Connecticut. (Council’s Hearing Notice dated March 25, 2013; Transcript 1, April 30, 2013, [Tr. 1], p. 3; Transcript 2, April 30, 2013 – 7:00 p.m. [Tr. 2], p. 3)
9. The Council continued the public hearing in New Britain on May 30, and June 11, 2013. The evidentiary portion of the proceeding closed on June 11, 2013. (Transcript 3 – May 30, 2013 [Tr. 3]; Transcript 4 – June 11, 2013 [Tr. 4])

10. The Council and its staff conducted an inspection of the original proposed site and the modified site on April 30, 2013, beginning at 2:00 p.m. During the field inspection, the applicant flew a black balloon at the original Docket 409 site and a red balloon at the proposed modified site, Both balloons were flown at their respective proposed heights. Weather conditions during the balloon fly were relatively calm, although a few wind gusts occurred. The balloons were aloft from approximately 12:00 p.m. to 7:00 p.m. for the convenience of the public. (Record; Tr. 4, p. 33)
11. Public notice of the Council's field review and hearing was published in Register Citizen on March 27, 2013 and The Lakeville Journal on April 4, 2013. (Record)
12. AT&T installed a four-foot by six-foot sign at the entrance to the property on April 9, 2013. The sign presented information regarding the project and the Council's public hearing in Falls Village. (AT&T 2)
13. AT&T provided a copy of the Council's public hearing notice to all abutting property owners pursuant to C.G.S § 15-50l and to agencies and entities listed in C.G.S § 16-50j. (AT&T 4, R. 1- R. 4)
14. The parties in this proceeding are AT&T, the Town of Canaan Inland Wetlands/Conservation Commission (IWCC), the Town of Canaan Planning and Zoning Commission, Patty and Guy Rovezzi, and Marc Rosen and Susan Pinsky. (Record)

#### **State Agency Comment**

15. On March 25, 2013, the following State agencies were solicited by the Council to submit written comments regarding the modified site: Department of Energy and Environmental Protection (DEEP); Department of Public Health; Council on Environmental Quality (CEQ); Public Utilities Regulatory Authority; Office of Policy and Management; Department of Economic and Community Development; Department of Agriculture; Department of Transportation; and Department of Emergency Management and Public Protection. (Record)
16. The CEQ provided written comments to the Council regarding the modified site on April 25 and May 29, 2013. CEQ expressed concerns regarding the effect of the project on forest fragmentation, scenic values, and wildlife. No other agencies provided a response. (Record)

#### **Public Need for Service**

17. The Connecticut Department of Public Safety experiences gaps in service on mobile devices in the Route 7, Route 63 and Under Mountain Road areas of Falls Village. (AT&T Administrative Notice 1; AT&T 7; Tr. 4, pp. 37-40)
18. In 1996, the United States Congress recognized a nationwide need for high quality wireless telecommunications services, including cellular telephone service. Through the Federal Telecommunications Act of 1996, Congress seeks to promote competition, encourage technical innovations, and foster lower prices for telecommunications services. (Council Administrative Notice Item No. 4)
19. In issuing cellular licenses, the Federal government has preempted the determination of public need for cellular service by the states, and has established design standards to ensure technical integrity and nationwide compatibility among all systems. (Council Administrative Notice Item No. 4; Record)
20. The Telecommunications Act of 1996 prohibits local and state entities from discriminating among providers of functionally equivalent services. (Council Administrative Notice Item No. 4)

21. The Telecommunications Act of 1996 prohibits any state or local entity from regulating telecommunications towers on the basis of the environmental effects, which include human health effects, of radio frequency emissions to the extent that such towers and equipment comply with the Federal Communications Commission's (FCC) regulations concerning such emissions. This Act also blocks the Council from prohibiting or acting with the effect of prohibiting the provision of personal wireless service. (Council Administrative Notice Item No. 4)
22. The Wireless Communications and Public Safety Act of 1999 (911 Act) was enacted by Congress to promote and enhance public safety by making 9-1-1 the universal emergency assistance number, by furthering deployment of wireless 9-1-1 capabilities, and by encouraging construction and operation of seamless ubiquitous and reliable networks for wireless services. (Council Administrative Notice Item No. 6)
23. Following the enactment of the 911 Act, the FCC mandated wireless carriers to provide enhanced 911 services (E911) to allow public safety dispatchers to determine a wireless caller's geographical location within several hundred feet. (Council Administrative Notice Item No. 6)
24. In December 2009, President Barack Obama recognized cell phone towers as critical infrastructure vital to the United States. The Department of Homeland Security, in collaboration with other Federal stakeholders, State, local, and tribal governments, and private sector partners, has developed the National Infrastructure Protection Plan to establish a framework for securing our resources and maintaining their resilience from all hazards during an event or emergency. (Council Administrative Notice Item No. 11)
25. Pursuant to the tower sharing policy of the State of Connecticut under C.G.S. §16-50aa, if the Council finds that a request for shared use of a facility by a municipality or other person, firm, corporation or public agency is technically, legally, environmentally and economically feasible, and the Council finds that the request for shared use of a facility meets public safety concerns, the Council shall issue an order approving such shared use to avoid the unnecessary proliferation of towers in the state. (C. G. S. §16-50aa)

#### **Changed Conditions**

26. New federal policies and facts were developed subsequent to the Council's Docket 409 decision. In 2011, the FCC analyzed carrier networks and developed a program to subsidize infrastructure development in underserved and rural areas that lack mobile broadband coverage. (AT&T 1, pp. 2-3)
27. The FCC identified a portion of the Town of Canaan as underserved, listing six census blocks as unserved and eligible for FCC infrastructure funding through an FCC auction (refer to Figure 2). (AT&T 1, pp. 2-4, Tab 3; Tr. 4, p. 67)
28. No wireless carriers submitted FCC auction bids for the FCC-listed Town of Canaan unserved areas. (AT&T 1, pp. 3-4)
29. To serve the FCC-designated areas, and to reduce the environmental effects of the proposed Docket 409 facility, AT&T located the modified tower site approximately 2,400 feet east of the original Docket 409 site. The tower height was also reduced from 150 feet, as proposed in Docket 409, to 120 feet above ground level (agl) at the modified site location. (AT&T 1, Tab 1, AT&T 2, Tab 2)

**AT&T's Existing and Proposed Wireless Coverage**

30. AT&T intends to operate in the cellular (800 MHz), PCS (1900 MHz), and long-term evolution (LTE - 700 MHz) frequency bands at the proposed modified site. LTE provides AT&T's highest speed broadband service. (AT&T 4, R. 30, Tab 1)
31. AT&T is seeking to provide, at a minimum, in-vehicle coverage (-82 dBm) to the service area. AT&T is also seeking to have the greatest footprint for in-building coverage (-74 dBm) since in-building use by its customers continues to increase. (Tr. 4, p. 44)
32. The proposed modified site would provide coverage to the following FCC designated unserved census blocks:

FCC-designated Unserved Census Block number	Percentage of Census Block served by modified site	Census Block Population (approximate, 2010 data)	Census Block Area (sq. mi)
1001	100	3	0.02
1010	100	2	0.15
1021	100	5	0.49
1088	72	6	0.7
1096	99	0	0.04
1076	99	0	0.06

(AT&T 3, R. 6, R. 8)

33. The proposed modified site would provide new in-vehicle coverage (-82 dBm, 850 MHz) to approximately 15 miles of roadway and an approximate 12 square mile area in the central portion of Canaan. The 2010 census identified a population of 357 people within this area (refer to Figure 3 & 4). (AT&T 2, R. 17, R. 19)
34. The proposed modified site would provide new in-building coverage (-74 dBm, 850 MHz ) to approximately 12.5 miles of roadway and an approximate nine square mile area in the central portion of Canaan. The 2010 census identified a population of 218 people within the new coverage area. (AT&T 2, R. 17, R. 19)
35. Non-reliable in-vehicle coverage would remain for approximately one mile of Route 63, generally between the intersections with Route 7 and Route 126. Short sections of insufficient in-vehicle service (0.1-0.2 mile) would occur on parts of Barnes Road, Route 126 and Route 7 (refer to Figure 2). (AT&T 1, Tab 4)
36. Areas identified as non-reliable could have service below AT&T's service standards. These non-reliable areas are affected as site capacity increases, causing reliability to decrease further. Additionally, adjacent sites attempt to provide coverage to these areas, and thus negatively affecting their performance. (Tr. 4, pp. 75-76)
37. The proposed modified site was not originally proposed in Docket 409 because it did not meet AT&T's original coverage objectives. AT&T now proposes the modified site as an acceptable alternative because it offers reliable coverage to most of AT&T's proposed service area as well as provides coverage to the FCC-designated unserved census blocks. The proposed modified site would not provide reliable coverage to areas west of Cobble Hill, notably Route 63, or to Barnes Road north of the site. AT&T has no current plan to provide reliable coverage to the areas west of Cobble Hill. (AT&T 1, Tab 4; AT&T 4, R. 20; Tr. 1, pp. 38-42)

## Modified Site Description

### *Property Characteristics*

38. The modified site is located on a 49.8-acre parcel owned by the Estate of Dorothy A. Forino. The parcel is east of the Docket 409 parcel, also owned by the Forino Estate, that contains a seasonal cabin (refer to Figure 3). (AT&T 2, Tab 2)
39. The property is zoned residential (R-80). (AT&T 2, Tab 2)
40. The property is wooded with a small clearing at the summit of Cobble Hill, elevation 1,270 feet above mean sea level (amsl). (AT&T 2, Tab 2)
41. The modified tower site is located on the eastern ridge of Cobble Hill, at an elevation of 1,205 feet amsl. (AT&T 2, Tab 2, Tab 3)
42. There are no residences within 1,000 feet of the modified tower site. The nearest residence to the modified tower site is approximately 1,580 feet to the north at 96 Barnes Road (Pilz residence). (AT&T 2, Tab 2)
43. The nearest property line to the modified tower site is 313 feet to the east (Nature Conservancy parcel) and thus, the tower setback radius would be contained within the site parcel. (AT&T 2, Tab 2)
44. There are no schools or commercial day care facilities within 250 feet of the modified tower site. (AT&T 2, R. 11)

### *Site Access*

45. Access to the proposed modified site would follow an existing, unimproved access drive for approximately 3,100 feet to the cabin. From the cabin, access would extend for approximately 2,100 feet, generally following a logging path uphill, across the summit of Cobble Hill, before gradually descending to the modified tower site. (AT&T 2, Tab 2; Tr. 1, p. 17)
46. AT&T would improve the existing access drive between Barnes Road and the cabin by regrading, widening certain curves to allow truck access and establishing a 12-foot wide gravel travel surface. (AT&T 2, Tab 2, Tab 3, p. 2; Tr. 1, pp. 17, 19)
47. The proposed travel surface would consist of 12-inches of gravel. (Tr. 3, p. 152)
48. All driveway construction work would be within an existing lease that grants a 30-foot wide access easement across several abutting properties (refer to Figure 5). Construction work would not extend beyond the 30-foot easement. (AT&T 2, Tab 2; Tr. 1, pp. 11-12; Tr. 3, p. 154)
49. A curve along the lower portion of the existing drive would be re-aligned to keep it within the recorded right-of-way easement. Field survey work indicates a short section of the existing access drive extends onto adjacent property not subject to the easement even though its current configuration has been in use for 25 years. (AT&T 2, Tab 2; Tr. 3, pp. 107-109)
50. The existing driveway to the cabin reaches grades of 35 to 39 percent. AT&T would regrade this portion of the access drive so that the steepest grade reaches 30 percent. (Tr. 1, pp. 16-18)

51. The proposed access drive from the cabin to the summit clearing would be at a grade of 18-20 percent before decreasing to about 9 percent. Beyond the summit clearing the road gradually descends to the tower site. (Tr. 1, pp. 16-18)
52. Approximately 3,900 feet of the proposed access drive would have a grade of 20 percent or less, 96 feet would have a grade of 20 to 23 percent, 960 feet would have a grade of 23 to 26 percent, and 255 feet would have a grade of 26 to 30 percent. (Tr. 1, p. 18)
53. The first 60 feet of the proposed access drive, where it begins from Barnes Road, would have a grade of 14 percent. (Tr. 4, p. 22)
54. AT&T would not install guardrails along the proposed access drive. (Tr. 3, pp. 155-156)
55. AT&T would pave 30 feet of the proposed access drive where it meets Barnes Road to provide stability for turning vehicles (AT&T 7, Tab 2; Tr. 3, p. 158)
56. AT&T would not plow the access drive in the winter except in the event of a power loss to the site and the emergency generator would need refueling. (Tr. 1, p. 21)
57. In the event the access drive is not plowed, AT&T could access the site using a tracked vehicle. (Tr. 1, pp. 42, 49)
58. The Town of Canaan does not restrict the use of salt, chemicals or sand on State maintained roads or on private property. (IWCC 3, R. 4)
59. Road construction may require vehicles to backup down the road, although space does exist at the top of the hill for construction vehicles to turn around. AT&T would specify what procedure to use in the construction contracts. (AT&T 6, R. 4; Tr. 4, p. 36).
60. Assist vehicles may be required to push or pull certain delivery trucks up to the site. No safety issues are anticipated with the use of such vehicles. Assist vehicles were used during the construction of an AT&T site in Woodbury, Connecticut. (AT&T Tr. 4, p. 35).

#### *Drainage Controls*

61. No drainage features currently exist along the existing access drive (AT&T 7, R. 6; Tr. 1, pp. 47-50)
62. There are no local violations regarding the current condition of the existing access drive. (Tr. 3, p. 65)
63. The proposed drainage system is designed to minimize the collection of water, maintain existing drainage patterns and protect the access drive from washouts. (AT&T 7, R. 5; Tr. 1, pp. 47-50; Tr. 3, pp. 151-152)
64. The proposed drainage system consists of V-shaped and trapezoidal-shaped drainage swales along most of the access drive. The swales would be lined with a specialized turf-reinforcing mat, except in sections of swale that are composed of bedrock. The mat (Landlok TRM 450) reduces water velocity through its woven construction and through the promotion of vegetation growth. (AT&T 3, Tab 3; Tr. 1, p. 14; Tr. 3, pp. 144-146)
65. The swale design criteria were based on the CT DOT Drainage Manual for 10-year storm peak flow. This design can convey the peak flows without causing erosive damage. (AT&T 3, Tab 3, p. 5)

66. The swales would discharge onto a vegetated drainage mat (Pyramat) that is specifically designed for steep slope applications and high stress/velocity discharges. Pyramat is designed to support vegetated growth within the mat's geo-synthetic mesh. The vegetation would further reduce discharge water velocity. The length of installed Pyramat is based on drainage and outflow calculations. (AT&T 7, R. 7; Tr. 1, pp. 13-14, 47-50)
67. Swales that fill up with or are blocked by vegetative debris would overflow, allowing water to run-off as it was prior to installation of the drainage system. (Tr. 3, pp. 147-148)
68. Pyramat was selected over outlet level spreaders and small detention basins to keep construction and finished road features within the 30-foot access drive easement. Other rock-based drainage features would require more space, exceeding the easement area. (AT&T 3, Tab 3; Tr. 1, pp. 47-50; Tr. 3, pp. 151-152)
69. Two culverts would be installed to allow vehicle access to the cabin area. The outfall from the swale in this area would be lined with riprap. (AT&T 6, R. 7; Tr. 1, pp. 14-15)
70. Runoff would not affect downslope areas on adjacent properties. The existing drainage pattern would be maintained post-construction. (AT&T 6, Tab 5)

#### *Tower and Compound*

71. AT&T would construct a 120-foot monopole within a 40-foot by 90-foot compound. (AT&T 3, Tab 2)
72. The proposed tower would not require aviation hazard marking or lighting. (AT&T 3, Tab 6)
73. The compound would be enclosed by an eight-foot high chain link fence. Three other carriers could locate within the compound. (AT&T 3, Tab 2)
74. The tower would be designed to support four carriers, including AT&T. (AT&T 1, tab 2)
75. AT&T would install 12 panel antennas on a platform at a centerline height of 116 feet above ground level. (AT&T 3, Tab 3)
76. The cumulative worst-case maximum power density from the radio frequency emissions from the operation of AT&T's proposed antennas is 12 percent of the standard for Maximum Permissible Exposure, as adopted by the FCC, at the base of the proposed tower. This calculation was based on methodology prescribed by the FCC Office of Engineering and Technology Bulletin No. 65E, Edition 97-01 (August 1997) that assumes all antennas would be pointed at the base of the tower and all channels would be operating simultaneously, which creates the highest possible power density levels. Under normal operation, the antennas would be oriented outward, directing radio frequency emissions away from the tower, thus resulting in significantly lower power density levels in areas around the tower. (AT&T 6)
77. Underground utilities would service the tower compound and would extend from a utility pole on Barnes Road. The utilities would be installed on the northeast side of the access drive, either between the road and proposed drainage features or to the outside of the proposed drainage features, depending on field conditions. The final design and utility route would be developed between AT&T and The Connecticut Light and Power Company. (Tr. 4, pp. 54-55)

78. An equipment shelter would be installed within the compound. A diesel generator would be installed on a concrete pad adjacent to the shelter with an associated 210-gallon double-walled tank. (AT&T 2, Tab 2; AT&T 4, R. 18)
79. The diesel generator would provide approximately 48 hours of service before refueling is necessary. (AT&T 4, R. 18; Tr. 4, p. 63)
80. AT&T would re-fuel the generator tank on an as-needed basis to account for fuel loss associated by periodic generator testing. (Tr. 4, p. 63)
81. Diesel fuel for the generator would be delivered by four-wheel drive vehicle. A standard fuel delivery truck would not be used. (Tr. 4, p. 62)
82. The estimated construction cost of the modified facility, not including radio equipment or antennas, is:

Tower and foundation	\$90,000.
Site development	\$260,000.
Utility installation	\$175,000.
<u>Facility installation</u>	<u>\$93,000.</u>
<u>Total estimated cost</u>	<u>\$618,000.</u>

(AT&T 6, R. 13)

### **Environmental Considerations**

#### *Historic*

83. Development of the proposed modified site would have no adverse effect on the South Canaan Congregational Church, a property listed on the National Register of Historic Places. The proposed modified facility would not be visible from this historic resource. (AT&T 4, R. 27)
84. The Burrall-Belden House, located at 6 Barnes Road and owned by Marc Rosen and Susan Pinsky, is an 18<sup>th</sup> century residence that abuts the existing access drive where it enters from Barnes Road. Documentation supporting the nomination of the house to the National Register of Historic Places is underway. The proposed tower would not be visible from this residence. (AT&T 3, Tab 4; Rosen-Pinsky 5; Tr. 4, p. 13)

#### *Site Disturbance*

85. The existing access drive to the cabin occupies approximately 1.45 acres of land. The proposed driveway reconstruction, realignment and extension of the modified tower facility would occupy an additional 1.7 acres of land. (AT&T 4, R. 36)
86. Approximately 1.8 acres of land would be disturbed for the construction of the access road from Barnes Road to the cabin area. (AT&T 6, R. 8)
87. Steep, exposed 1:1 and 2:1 slopes adjacent to the road would be covered with Pyramat to prevent erosion. The mats stabilize the disturbed surfaces while allowing vegetation to grow through, further enhancing stability and infiltration. (AT&T 6, R. 6; Tr. 1, pp. 52-53; Tr. 3, p. 154)

88. The project would require 570 yards of cut and 3,700 yards of fill, of which, 2,300 yards is gravel associated with the access drive. (AT&T 6, R. 11)
89. Soils along the access road and in the compound area range in depth from exposed ledge up to 20 inches. AT&T would remove any rock or ledge only when necessary through chipping. No blasting would be used during construction. (Tr. 1, pp. 17, 51; Tr. 4, pp. 50-51)

#### *Plants and Wildlife*

90. According to the Natural Diversity Database (NDDDB) map for the Town of Canaan, dated June 2013, the modified site is not within an area indicating the presence of State and Federal endangered, threatened or special concern species. (Council Administrative Notice Item 52; AT&T 4, R. 69, R. 70)
91. AT&T submitted a NDDDB review request to DEEP as part of this re-opened proceeding. The Council did not receive a copy of DEEP's response to AT&T by the close of the record. (Tr. 3, pp. 122-123; Record)
92. In the Docket 409 proceeding, AT&T performed a preliminary habitat evaluation consisting of a field inspection of the construction area and property. This habitat evaluation was submitted to the DEEP. Although the DEEP has records of 72 State-listed endangered, threatened or special concern species occurring within a two-mile radius of the proposed tower site, the DEEP indicated that there is no evidence that any of these species occur within the proposed construction area. (Record; Tr. 3, pp. 122-123)
93. Cobble Hill contains habitat for the Eastern Timber Rattlesnake (*Crotalus horridus*) a State-endangered species, although the presence of this species is unknown. AT&T could implement a contractor awareness program to reduce impacts to this species, if present, during construction. (Tr. 1, pp. 59-61)
94. Historic records of two state species of special concern plants, the Sharp-lobed hepatica (*Hepatica acutiloba*), and the Purple Cress (*Cardamine douglassii*) occur on an abutting property to the east and owned by The Nature Conservancy (TNC). Both species favor shaded calcareous woodlands although the Purple Cress is more of a wetland species and most likely would not be found on higher ridges. Both species were last recorded on TNC's property in 1988. Although AT&T performed a preliminary habitat survey and did not identify these species, the survey was conducted in early spring, before herbaceous growth was in abundance. (AT&T 4, R. 64; IWCC 11; Tr. 3, pp. 27-29)
95. The State endangered Golden Wing Warbler (*Vermivora chrysoptera*) was recorded on TNC's property in 1996. This species breeds in openings in woodland swamps and overgrown pastures but will use uplands as long as successional habitat is nearby. (IWCC 11; Tr. 1, pp. 25-28)
96. No Important Bird Areas, as designated by the National Audubon Society, are within two miles of the site. (AT&T 6, R. 2)
97. Use of the access road would have a minimal disruption to wildlife when compared to regular-use roadways given that the proposed access drive is relatively narrow, would have a low usage rate and the associated drainage system would maintain existing drainage patterns. (AT&T 6, R. 12; Tr. 3, pp. 121, 127-128)

#### *Wetlands and Watercourses*

98. No wetlands were identified within 200 feet of the construction areas, except for a wetland associated with Wangum Lake Brook, located approximately 200 feet north of the existing access road entrance on

Barnes Road at its closest point. Barnes Road and a private residence are located between the access road entrance and Wangum Lake Brook. (AT&T 3, Tab 2, Tab 3; AT&T 4, Tab 3; Tr. 3, p. 106)

99. A wetland exists approximately 500 feet to the east-southeast, and downgradient, of the modified tower site. The proposed drainage design would not affect this wetland as it is designed to maintain existing flow patterns and discharge rates. (AT&T 3, Tab 2, Tab 3; AT&T 4, R. 37, R. 44)
100. Robbins Swamp is approximately 1,250 feet northwest of the access drive entrance on Barnes Road at its closet point to the site. Barnes Road, Route 7 and several residences are between Robbins Swamp and the access drive entrance. (AT&T 4, Tab 3)
101. Amphibians that breed in Robbins Swamp and adjacent waterways (Wangum Lake Brook) are not likely to use the upper slopes of Cobble Hill as terrestrial habitat due to the distance from the waterways and the steep gradient to the top of Cobble Hill. Amphibians from these waterways are more likely to be found at lower elevations, and possibly along the lower sections of the existing access drive. (Tr. 3, pp. 124-126)
102. AT&T would establish an amphibian/reptile awareness program during construction to reduce mortality of such species. (Tr. 3, p. 126)
103. The proposed project conforms to the vernal pool conservation guidance document *Best Development Practices: Conserving Poll-breeding Amphibians in Residential and Commercial Developments in the Northeastern United States* by being of sufficient distance from the two nearest identified wetlands and maintaining sufficient areas of non-developed land in the project area. (Council Administrative Notice Item 49; AT&T 4, Tab 3)

#### *Core Forest Values*

104. The existing access road is promoting the growth of invasive species into the surrounding forested area. Extension of the access drive beyond the cabin to the tower site could cause invasive species to penetrate further into the forest. To reduce the impact of invasives, AT&T proposes to establish a five-year invasive species management plan to monitor and remove invasives within the construction areas. If invasives were persistent beyond year five, AT&T would conduct further management activities. (AT&T 6, R. 12; Tr. 3, pp. 131-132)
105. The habitat on Cobble Hill is typical of northwest Connecticut, consisting of an oak forest on glacial-influenced soil, with mature trees reaching a height of 40 to 50 feet. This habitat is present throughout the property and on adjacent parcels. (AT&T 4, Tab 4; Tr. 1, p. 24; Tr. 3, p. 120-121)
106. Soils are shallow and rocky with limited capability of supporting a rich shrub understory. (AT&T 4, Tab 4; Tr. 3, pp. 120-121)
107. The cleared area near the summit is approximately 1.25 acres in size. (AT&T 4, Tab 4)
108. The forest on Cobble Hill is classified as an intact core forest area of approximately 650 acres. The core forest designation, as identified by a database maintained by the University of Connecticut's Center for Land Use Education and Research (CLEAR), is an undisturbed forest area of at least 500 acres. The Cobble Hill core forest encompasses all of Cobble Hill, with exception of the summit clearing. According to the CLEAR database, the existing access drive is not identified as fragmenting the designated core forest area. (AT&T 6, R. 12; Tr. 3, p. 129)

109. Approximately 297 trees with a diameter of six-inches or greater at breast height would be removed to develop the modified site. Approximately 85 trees would be removed along the existing access drive but enough substantial trees would remain to minimize the opening of the forest canopy. (AT&T 4, R. 12; AT&T 6, R. 8; (Tr. 1, p. 23)
110. The metrics used by the CLEAR program to determine the minimum threshold for identifying canopy openings is unknown. A few other roads and adjacent residences in the area were not considered to fragment the forest canopy. (Tr. 4, pp. 46-47)
111. If the upgraded access drive and tower site were considered to fragment the core forest on Cobble Hill, the remaining core forest, post construction, would total 580 acres, above CLEAR's 500-acre core forest threshold. The reduction of 70-acres of core forest does not equate to the clearing of 70-acres of forest but rather counts as edge forest. (AT&T 6, R. 12; Tr. 3, p. 129; Tr. 4, pp. 71-72)

### Visibility

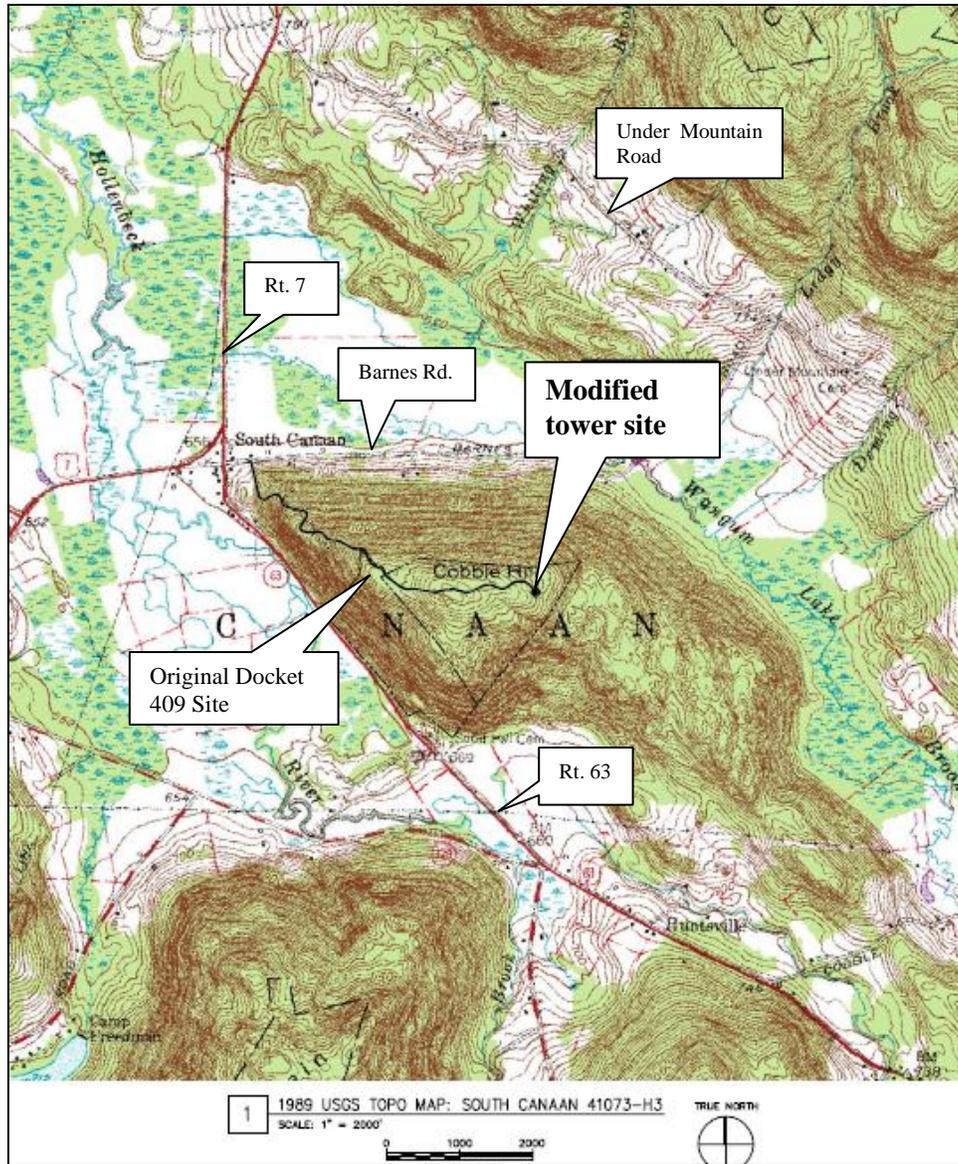
112. The proposed 120-foot tower would be visible year-round from approximately 325 acres within a two-mile radius of the modified tower site (refer to Figure 5), mostly from open field areas along Under Mountain Road, Route 63, and west of Route 7. (AT&T 3, Tab 4)
113. The proposed tower would be visible during leaf-off conditions from an additional 450 acres within two miles of the site, with 250 acres occurring over undeveloped swampland and agricultural fields mostly to the north and northwest. Another 60 acres of seasonal visibility would occur along the forested top of Cobble Hill. (AT&T 3, Tab 4)
114. The proposed tower would be visible year-round from approximately ten residential properties within two miles of the site, as follows: four residences on Under Mountain Road, four residences on Route 63, one residence on Music Mountain Road, and one residence on Barnes Road. (AT&T 3, Tab 4; AT&T 6, R. 1)
115. The proposed tower would be visible during leaf-off conditions from an additional nine residences within two-miles of the site. (AT&T 3, Tab 4)
116. The proposed 120-foot tower would be visible year-round from several spot areas (200-500 feet in length) along Route 7, a State designated scenic road approximately one mile northwest of the tower site. Approximately 5 to 15 feet of the upper portion of the tower would be visible as one travels south along the roadway. (AT&T 3, Tab 4)
117. The proposed tower would be visible from approximately 1.6 miles of Under Mountain Road northwest of the site. The road, oriented in a northwest to southeast direction, generally has large downward sloping field areas south of the roadway. Seasonal views would occur on the north side of the road as it slopes upwards towards the Canaan Mountain area. (AT&T 3, Tab 4)
118. The proposed tower would be visible from Barnes Road as one travels south from Under Mountain Road. (AT&T 3, Tab 4)

119. Visibility of the proposed 120-foot tower from select locations is presented in the table below. The photo-location numbers correspond to the locations on Figure 6.

<b>Specific Location and Area Receptors</b>	<b>Photo location on Map</b>	<b>Approx. Portion of Tower Visible</b>	<b>Approx. Distance from Tower (miles)</b>
Aspen Hill Drive	1	70 feet – barely discernible	1.9 S
Music Mountain Road	2	70 feet – unobstructed	1.7 S
Cobble Road	3	70 feet – unobstructed	1.2 SE
Route 63 (Huntsville)	4	70 feet – unobstructed	0.8 SE
Route 63 (Huntsville at farm)	5	70 feet - unobstructed	0.8 SE
Route 63 at Music Mtn. Road	6	50 feet – unobstructed	0.7 S
Music Mtn. Road	7	50 feet – unobstructed	0.8 S
Route 126	8	25 feet – through trees	0.6 SW
South Canaan Meeting House	9	Not visible	0.9 W
Route 7	10	15 feet – unobstructed	1.3 NW
Under Mountain Road	11	50 feet – unobstructed	1.2 NW
Under Mountain Road	12	60 feet – unobstructed	0.9 N
Under Mountain Road near Barnes Rd.	13	60 feet – unobstructed	1.0 NE

(AT&T 3, Tab 4)

120. There are no DEEP or Connecticut Forest and Park Association maintained hiking trails within two-miles of the site. A new hiking trail is proposed along the south side of Canaan Mountain. This proposed trail could cross a local summit known as Stone Man Mountain, approximately 2 miles northeast of the tower site. Stone Man Mountain has an open summit with views to the south and west, towards the site. (AT&T 3, Tab 4; IWCC 3, R. 2; Tr. 1, pp. 30-31; Tr. 3, pp. 19-22)
121. Tower stealth applications for the proposed modified site would not be practical given the height of the tower above the trees. A “tree tower” or faux fire tower would have a bulky appearance, extending well above the canopy, and thus would be out of context with the surroundings. (Tr. 1, pp. 58-59)



**Figure 1:** Approximate location of proposed modified site on Cobble Hill.

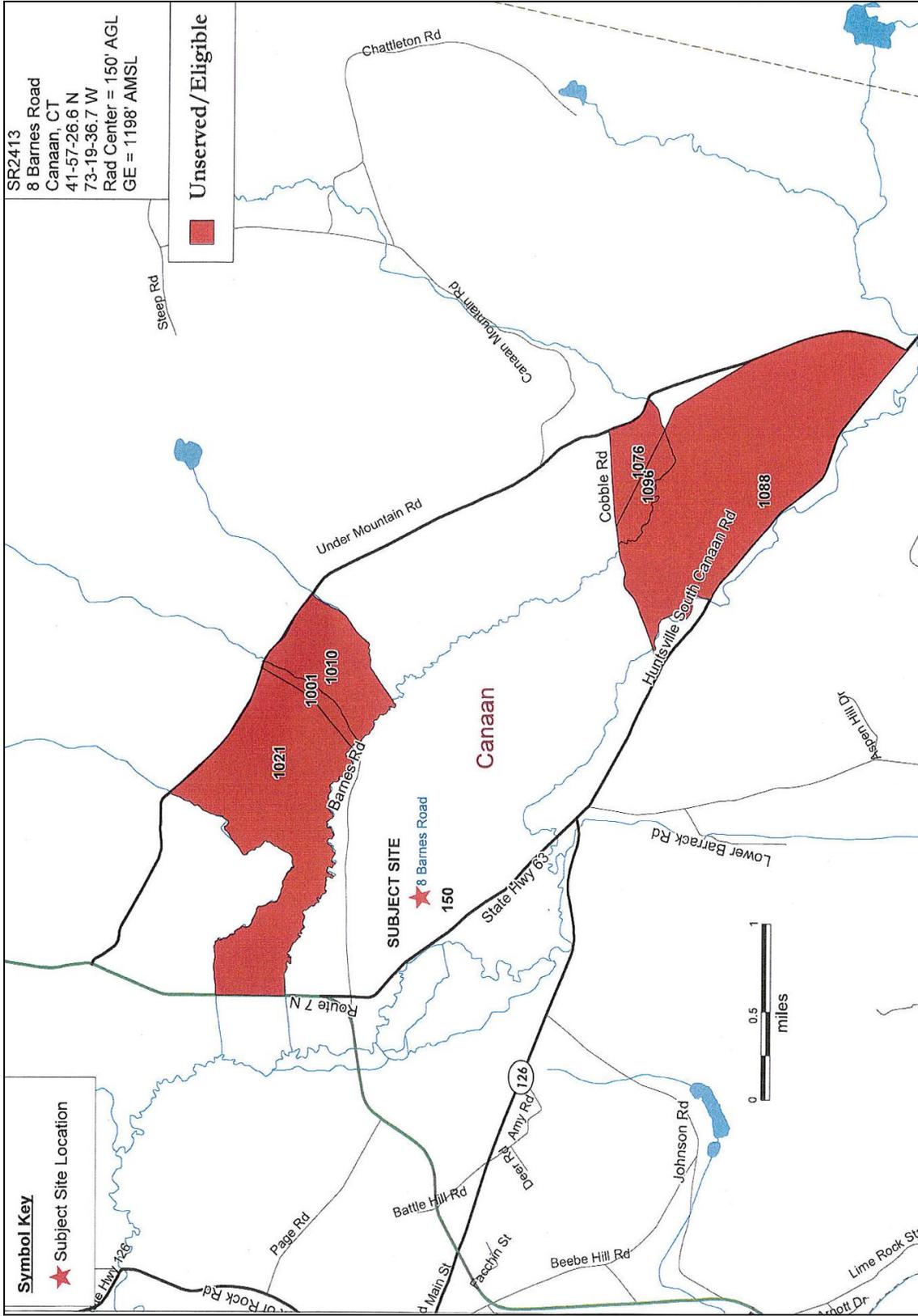
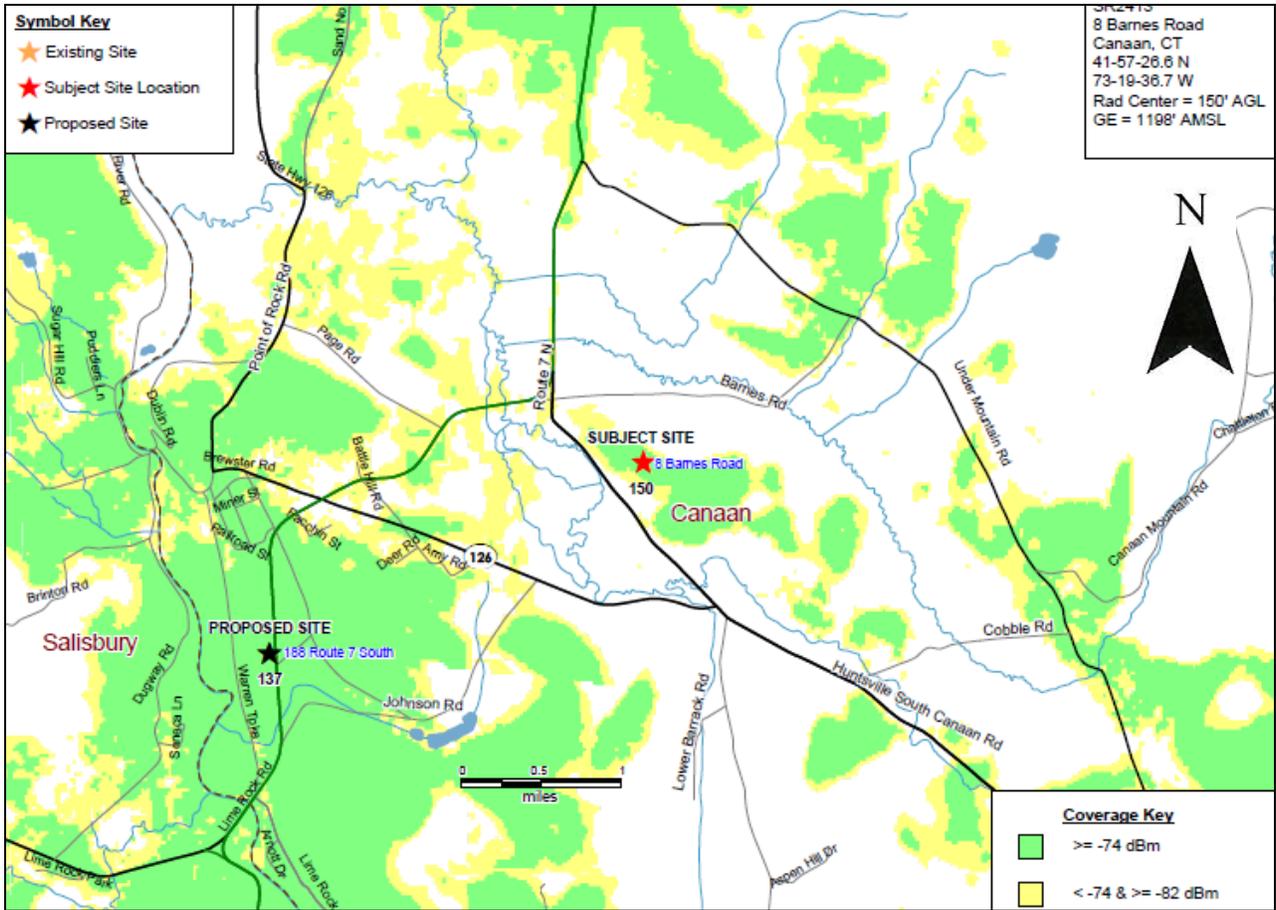
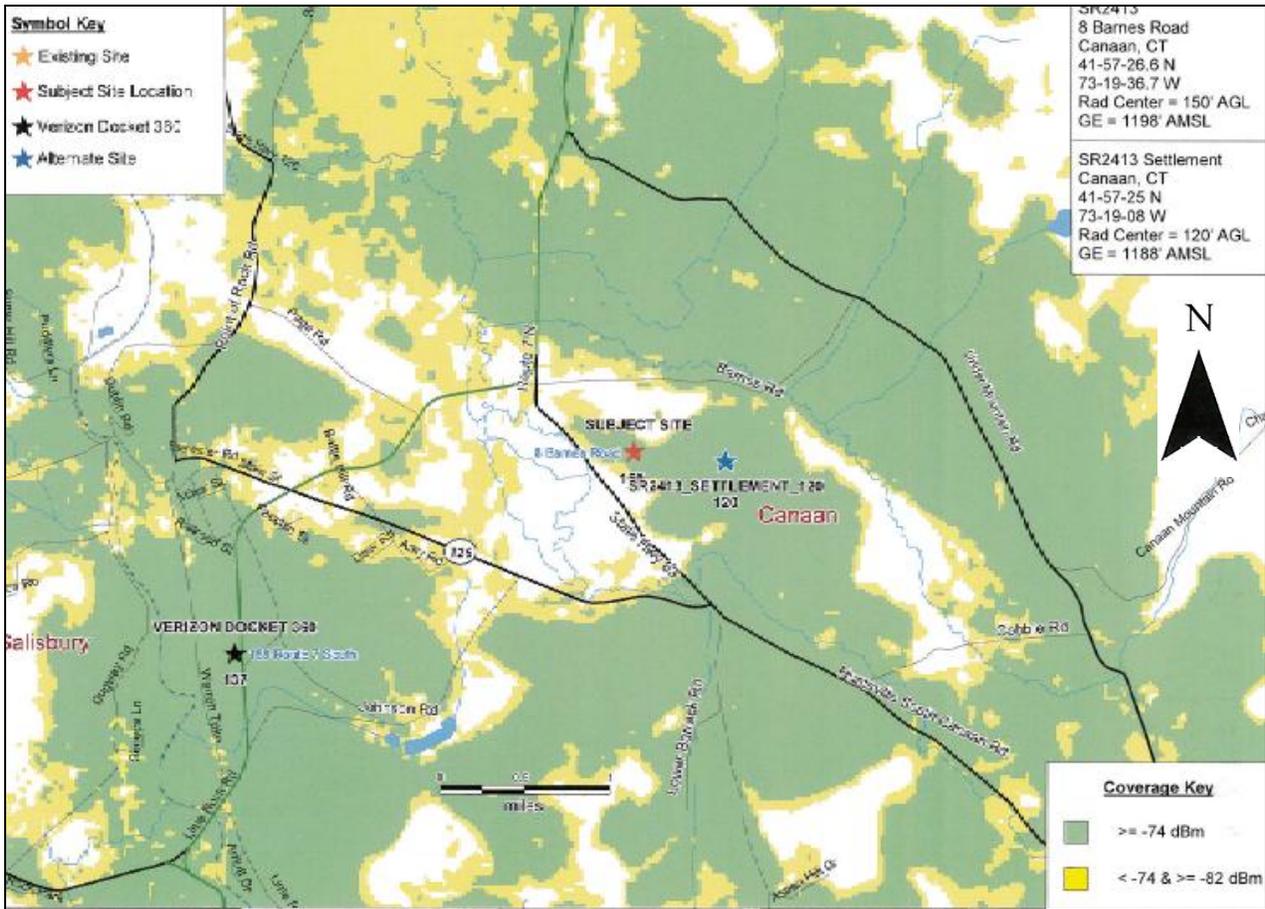


Figure 2: FCC designated unserved census blocks. (AT&T 1)



**Figure 3:** Existing AT&T Coverage including coverage from the AT&T's proposed 188 Route 7 South facility (Approved Council Docket 360). (AT&T 3, Tab 8)



**Figure 4:** Proposed coverage from the modified site location (shown as blue star) . The red star (Subject Site) is original Docket 409 location. The black star is a Council approved facility (Docket 360) where AT&T is proposing to locate at the 137-foot level. (AT&T 1, Tab 4; Tr. 3, pp. 114-116)

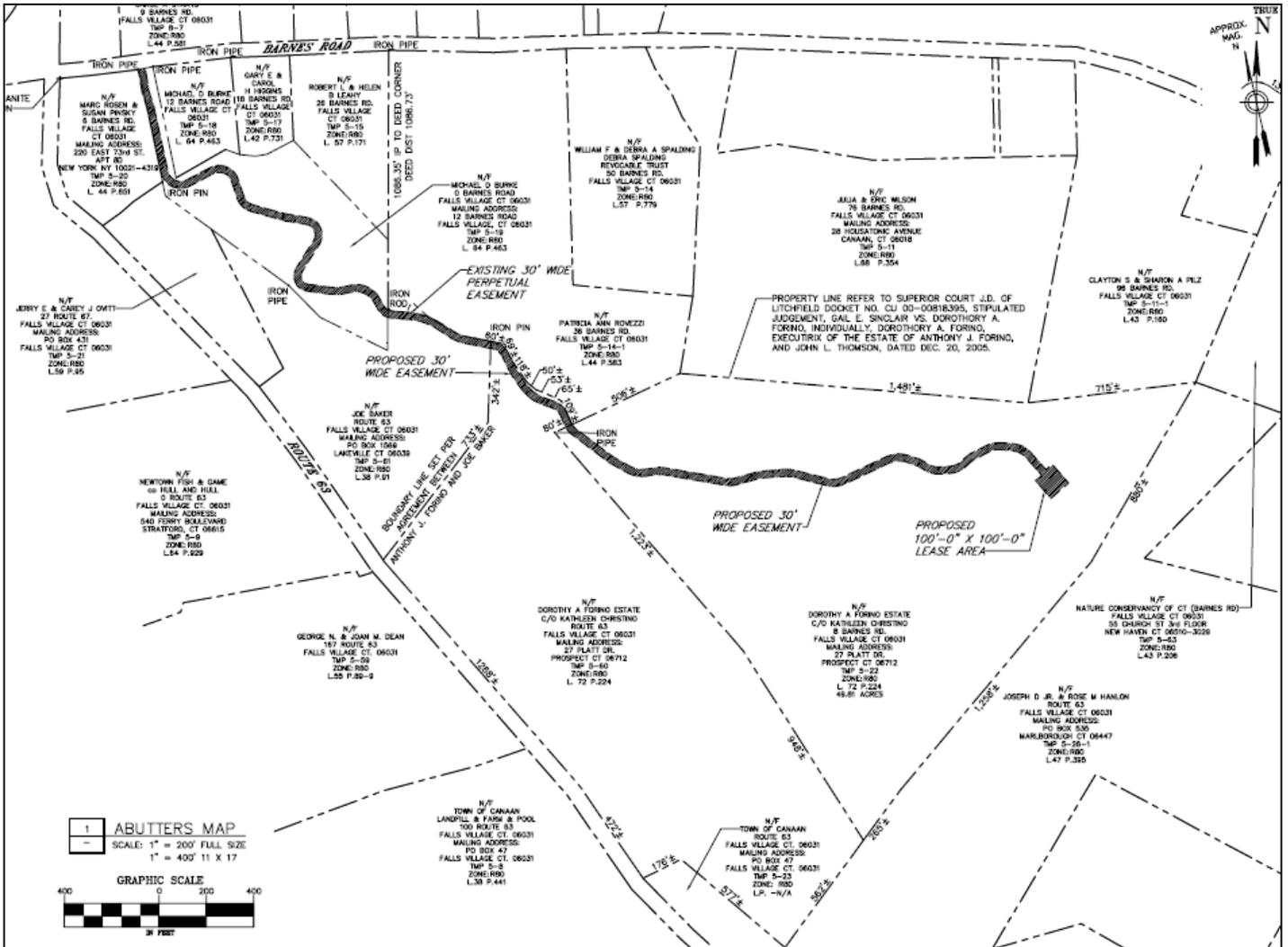
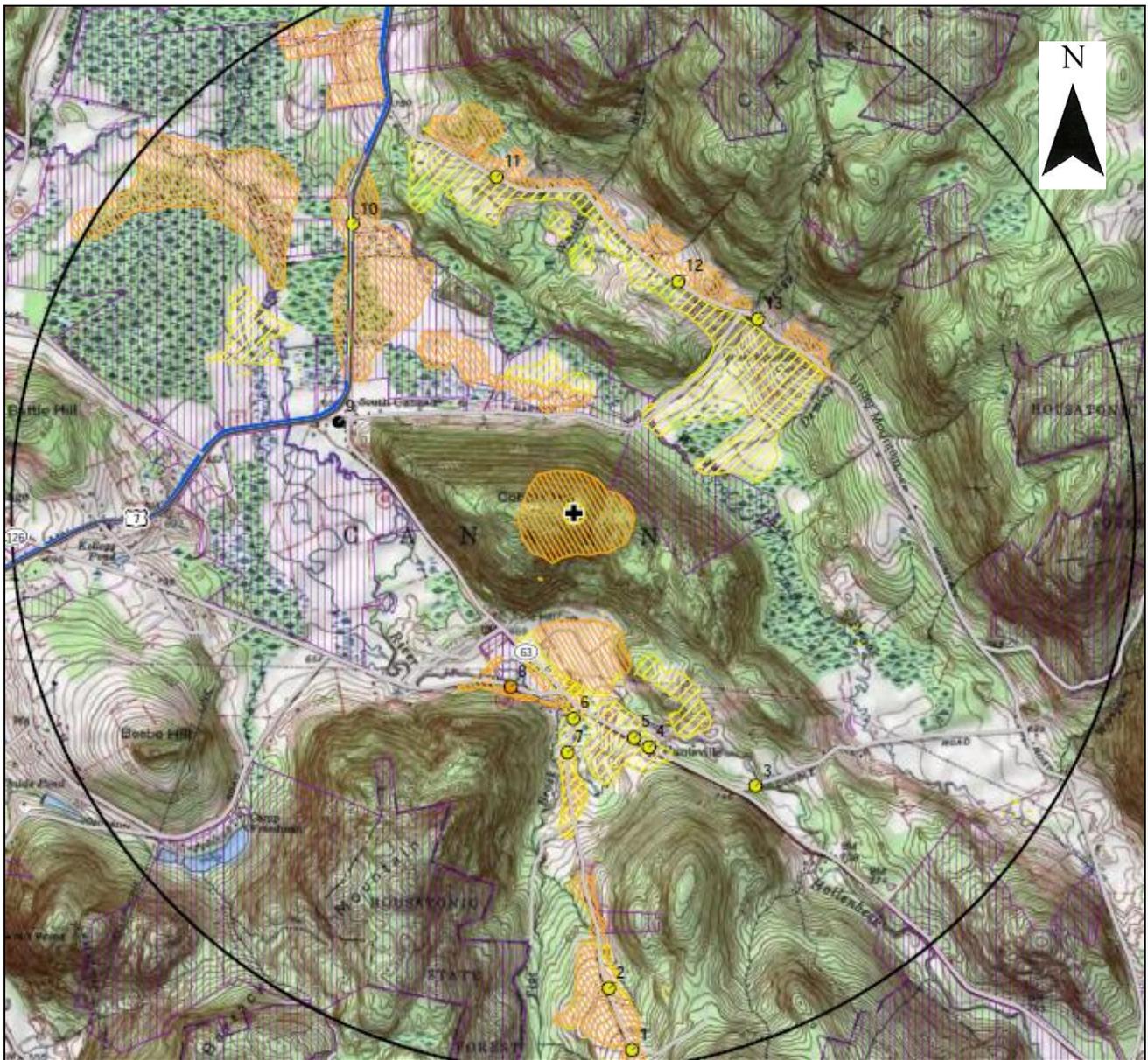


Figure 5: Site Access Easement and abutting property lines. (AT&T 1, Tab 4)



**Legend**

- + Proposed settlement location
- Orange hatched box Predicted Seasonal Visibility
- Yellow hatched box Predicted Year-Round Visibility
- Black circle 2-Mile Study Area

**Figure 6:** Projected visibility of the proposed 120-foot modified facility. (AT&T 3, Tab 4)



**Photo-simulation 5 on Visibility Map –\_View from Route 63, 0.8 miles southeast of site. (AT&T 4)**



**Photo-simulation 12 on Visibility Map** –\_View from Under Mountain Road, 0.9 miles north of site.  
(AT&T 4)